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Construction Cost Estimate Livermore Site Solar Generation Project

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October 8, 2013

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This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

CONSTRUCTION COST ESTIMATE

SUMMARY SHEET

Project Title: Livermore Site Solar Electric Generation Project Date: 22-Jul-2013
Rev-2 PFN: TBD
Facility ID: Site 200 NW Work Order Number: TBD
Requestor: Crystal Quinly Project Number: TBD
Estimator: Lee Phillips Estimate Task Number: TBD
Estimate Class: Class 3 - Budget, with an accuracy range of -15% to +25%
Funding Source: DIR-MISC REV NONEX

Review Only
NOT for
Construction

CONSTRUCTION COST	
SUPPORT COST	\$ 69,797
CONTINGENCY COST	\$ 6,980
PERFORMANCE BASELINE COST	\$ 76,777

SCOPE OF WORK

- Authorize a third party to finance, permit, design, engineer, procure and construct a 3MW AC ground-mounted,
- fixed tilt solar energy generation facility for a duration of 20 or 30 years.
- LFO has selected an Integrated Project Team (IPT) to define the project scope of work and insuring the work
- is executed safely and per contract requirements.
- LFO has engaged LLNS to help define and support this effort.
- The IPT consists of PMEC Design / Engineering Staff, PMEC Construction Management Staff and ES&H Staff.
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DRAWINGS / SPECIFICATIONS / CRITERIA - As per LLNL standards and specifications

- Responsibilities and Interface Matrix developed by LFO and LLNS.
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ESTIMATING ASSUMPTIONS

Support / Institutional Costs

- Support Costs are based on percentages & hours, reviewed by Project Management.
- Wage expense is based on a PR Burden of (61.1%) for LLNL employees.
- Institutional Burdens are based on an Funding Source of
- **DIR-MISC REV NONEX**
- Indirects charges include PMC (0.0%), Site Support (48.8%).
- Value Added charges include, G&A (21.4%), SMS (0.0%) and HWC (0.0%).
- Institutional Charges include MF (3.5%), LDRD (6.6%) and S_S - WFO (0.0%).

Labor Resource	
PO Union	
FY 13 Dollars	
Burden Factors - 7/18/13	
Indirects	48.78%
Value Added	21.35%
Institutional	10.02%

Levels / Duration / Escalation

- The estimate classification is a "Class 3 - Budget Cost Estimate", with an accuracy range of -15% to +25%.
- The estimate contains a 0% project contingency.
- The estimate contains a 0% bid package completion factor, based on design completeness of 10% to 40%.
- The estimate contains a 0% limited / exclusion factor for construction work in these areas.
- The estimated construction duration is 0 calendar days with construction starting 21-Aug-2013.
- The project escalation rate is current dollars

LLNL Supplied Materials and Equipment

- None

Cost Exclusions / Comments

- Premium and / or overtime is not included.
- Escorts are not included.
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CONSTRUCTION COST ESTIMATE

WBS SUMMARY SHEET

Project Title: Livermore Site Solar Electric Generat Date: 22-Jul-13

Rev-2

Facility ID: Site 200 NW

Requestor: Crystal Quinly

Project Number: TBD

Task Number: TBD

Estimate Class: Class 3 - Budget

Funding Source: DIR-MISC REV NONEX

Work Order: TBD

PFN: TBD

Estimator: Lee Phillips

CEP Lead: Lee Phillips

Projects Lead: Rich Shonfeld

				CONSTRUCTION FY14 (4 MO) ETC		
WBS	DESCRIPTION	HOURLY RATES		TASK NUMBER		
	Estimated Construction Duration - Effort Hours				4	590
	171.4 hours/month	OT	ST			
	21.43 days/month					
	4.29 weeks/month					
1.1	1.1 PROJECT MANAGEMENT			Subtotal:	\$ -	
1.1.1	Management		242.22	Task Number		
1.1.2	Project Support	126.41	122.45	Task Number		
1.1.3	Office (Travel, Training, Supplies)	126.41	122.45	Task Number		
1.1.4	Project Controls (EVM) Support		155.94	Task Number		
1.2	1.2 DESIGN			Subtotal:	\$ 45,593	
1.2.1	Design (PMEC)		219.45	Task Number	23,700	18.2%
1.2.2	Design (EUD)		198.53	Task Number	2,382	2.0%
1.2.3	Value Engineering / Solar Consultant		242.22	Task Number	12,353	8.6%
1.2.4	Estimating / Constructability Review		178.96	Task Number	7,158	6.7%
1.3	1.3 CM & I			Subtotal:	\$ 16,875	
1.3.1	CM (LLNL)		198.53	Task Number	16,875	14.4%
1.3.2	CM (External)	238.36	88.02	Task Number		
1.3.3	Inspection / AHJ		178.96	Task Number		
1.3.4	Scheduler		155.94	Task Number		
1.3.5	Cost Estimating (Construction)		178.96	Task Number		
1.3.6	CM&I Admin Support	111.88	108.38	Task Number		
1.4	1.4 CONSTRUCTION, ACTIVATION & COMMISSIONING			Subtotal:	\$ -	
1.4.1	ESTIMATED CONSTRUCTION COST (TECC)			Subtotal:	\$ -	
1.4.4	Protective Services	160.97	155.94	Task Number		
1.4.5	Special Testing / Locators	160.97	155.94	Task Number		
1.4.6	Miscellaneous Construction	141.79	137.36	Task Number		
1.4.7	M&O Documentation / As-Builts		137.36	Task Number		
1.5	1.5 MISCELLANEOUS PROJECT SUPPORT			Subtotal:	\$ 7,329	
1.5.1	Hazards Control		155.94	Task Number	7,329	7.9%
1.5.2	EPD / Permits		137.36	Task Number		
1.5.3	Analyst		137.36	Task Number		
1.5.4	Soil Testing		137.36	Task Number		
1.5.5	NEPA		155.94	Task Number		
1.5.6	Program Support Cost			Subtotal:		
	PERFORMANCE MEASUREMENT BASELINE (PMB)			Subtotal Hours:		343
	(PB) CONTINGENCY			Total:	\$ 69,797	
	PERFORMANCE BASELINE (PB)				6,980	10.00%
					\$ 76,777	